35. (New) The network switch of claim 19 wherein one or more of the ingress interfaces segregates incoming data into queues based on a service class identifier.

REMARKS

Applicants respectfully request reconsideration of the present U.S. Patent application. Claim 9 has been amended. Claims 5 and 21 have been canceled. Claims 22-35 have been added. Thus, claims 1-4, 6-20 and 22-35 are pending.

Claim Rejections - 35 U.S.C. § 102(b)

Claims 1-4, 6, 7, 11, 15, 19 and 20 were rejected as being anticipated by U.S. Patent No. 6,058,116 issued to Hiscock, et al. (*Hiscock*). For at least the reasons set forth below, Applicants submit that claims 1-4, 6, 7, 11, 15, 19 and 20 are not anticipated by *Hiscock*.

Claim 1 recites

> A network switch having an asynchronous mesh to transfer data from ingress interfaces to egress interfaces, the ingress interfaces to receive data from external sources and to selectively and asynchronously transmit the data across the asynchronous mesh to the egress interfaces, the egress interfaces to receive data from the asynchronous mesh and to transmit the data to external destinations.

Thus, Applicants claim a switch ***having*** a mesh interconnect. The mesh is asynchronous. The switch asynchronously transmits data from ingress interfaces to egress interfaces.

To anticipate a claim, the reference must teach every element of the claim. MPEP § 2131 states:

> "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior

> art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Thus, if *Hiscock* does not disclose each and every element of the claimed invention, *Hiscock* cannot anticipate the claimed invention.

As a preliminary matter, *Hiscock* discloses a switch that is part of a high-speed mesh. See col. 3, lines 54-56. That is, *Hiscock* does not disclose a switch having a mesh as claimed in claim 1. Moreover, *Hiscock* does not disclose that the mesh is an asynchronous mesh. The word "asynchronous" does not even appear in the *Hiscock* reference. Therefore, *Hiscock **cannot*** anticipate the invention as claimed in claim 1.

Claims 2-4, 6 and 7 depend from claim 1. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claims 2-4, 6 and 7 are not anticipated by *Hiscock* for at least the reasons set forth above.

Claim 11 recites:

> a plurality of ingress cards, the plurality of ingress cards having an ingress buffer to temporarily store data, an ***ingress scheduler*** coupled to the ingress buffer, and a plurality of ports coupled to the ingress scheduler, the ingress scheduler to read data from the ingress buffer and to selectively transfer the data to one of the plurality of ports; and
>
> a plurality of egress cards, the plurality of egress cards having a plurality of ports coupled to receive data from respective ingress card ports, an egress buffer coupled to the plurality of ports, the egress buffer to selectively read data from the plurality of ports and to store the data, and an ***egress scheduler*** coupled to the egress buffer, ***the egress scheduler to read data from the egress buffer and to transmit data from the egress card***.

Thus, Applicants claim a network switch having an ingress scheduler ***and*** an egress scheduler. The egress scheduler reads data from the egress buffer and transmits data from the egress card.

The Office Action cites traffic steering means 44 (in Figure 2A) as a scheduler and no alleged equivalent of the egress buffer is indicated. As mentioned above, *Hiscock* does not disclose a network switch. Moreover, *Hiscock* does not disclose an ingress scheduler and an egress scheduler that reads data from an egress buffer and transmits data from the ingress card. Therefore, *Hiscock* does not anticipate the invention as claimed in claim 11.

Claim 15 depends from claim 11. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claim 15 is not anticipated by *Hiscock* for at least the reasons set forth above.

Claim 19 recites:

> N ingress cards coupled to receive data from external sources, the N ingress cards having a plurality of ports to transmit data, wherein ***each of the N ingress cards comprises an ingress scheduler*** coupled to the ports of the ingress card, the ingress scheduler to cause data to be selectively and asynchronously transmitted via the ports of the ingress card; and
>
> M egress cards having ports coupled to receive data from one or more of the plurality of ports of the N ingress cards, the egress cards coupled to transmit data to external destinations, wherein ***each of the M egress cards comprises an egress scheduler*** coupled to the ports of the egress card, the egress scheduler to cause data to be selectively transmitted to the external destinations.

Thus, Applicants claim a switch having N ingress cards, each of which has an ingress scheduler, and M egress cards, each of which has an egress scheduler.

Hiscock does not disclose a switch having a plurality of ingress cards and a plurality of egress cards. Therefore, *Hiscock* cannot disclose ingress cards with ingress schedulers and egress cards with egress schedulers. Thus, *Hiscock* cannot anticipate the invention as claimed in claim 19.

Claim 20 depends from claim 19. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claim 20 is not anticipated by *Hiscock* for at least the reasons set forth above.

Claim Rejections - 35 U.S.C. § 103(a)

Claims 5, 8-10, 13, 14, 17 and 21 were rejected as being unpatentable over *Hiscock* in view of U.S. Pub. No. 2002/3385567 of Ku, et al. (*Ku*). Claims 5 and 21 have been canceled. Claims 22-35 have been added that recite limitations similar to canceled claims 5 and 21. For at least the reasons set forth below, Applicants submit that claims 8-10, 13, 14, 17 and 22-35 are not rendered obvious by *Hiscock* and *Ku*.

Claims 22-35 recite limitations directed to segregating incoming data based on various identifiers. The Office Action states that *Ku* discloses the identifiers. While *Ku* may discloses some of the identifiers, *Ku* does not disclose segregation of incoming data as claimed in claims 22-35. Moreover, *Ku* does not disclose asynchronous transfer of data between ingress and egress ports. Therefore, *Ku* does not cure the deficiencies of *Hiscock*. Thus, no combination of *Hiscock* and *Ku* teaches or suggests the invention as claimed in claims 22-35.

Claim 8 recites shared egress buffers. Applicants agree with the Office Action that *Hiscock* does not disclose a shared egress buffer. *Ku* explicitly discloses a single distribution channel coupled to a single output buffer 618. See paragraph 0061, first sentence. Therefore, no combination of *Hiscock* and *Ku* teaches or suggests the invention as claimed in claim 8.

Claim 9 is rejected on *Hiscock* individually. See Office Action at page 5, second full paragraph. As discussed above, *Hiscock* fails to disclose the invention as claimed in claim 1 and therefore claim 9 as well.

Claim 10 recites concurrent transmission of fixed-length cells and variable-length packets across the mesh. While *Ku* discloses multiple protocols, *Ku* does not disclose concurrent transmission. Therefore, no combination of *Hiscock* and *Ku* teaches or suggests the invention as claimed in claim 10.

Claims 13, 14 and 17 depend from claim 11. As discussed above, *Hiscock* does not disclose a network switch having an asynchronous mesh. As discussed in the previous response, *Ku* does not disclose a network switch having an asynchronous mesh. Therefore, no combination of *Hiscock* and *Ku* can teach or suggest the invention as claimed in claim 11 or claims 13, 14 and 17, which depend from claim 11.

Claim 12 was rejected as being unpatentable over *Hiscock* in view of U.S. Patent No. 5,889,778 issued to Huscroft, et al. (*Huscroft*). Claim 12 depends from claim 11 discussed above. *Huscroft* is cited to teach a FIFO buffer to receive data. However, whether or not *Huscroft* discloses a FIFO buffer, *Huscroft* does not cure the deficiencies of *Hiscock*. Therefore, no combination of *Hiscock* and *Huscroft* renders claim 12 obvious.

Claim 16 was rejected as being unpatentable over *Hiscock* in view of U.S. Patent No. 6,201,809 issued to Hunt, et al. (*Hunt*). Claim 16 depends from claim 11 discussed above. *Hunt* is cited to teach retransmission of data. However, whether or not *Hunt* discloses retransmission of data, *Hunt* does not cure the deficiencies of *Hiscock*. Therefore, no combination of *Hiscock* and *Hunt* renders claim 16 obvious.

Claim 18 was rejected as being unpatentable over *Hiscock* in view of *Ku* and further in view of U.S. Patent No. 6,154,446 issued to Kadambi, et al. (*Kadambi*). Claim 18 depends from claim 11 discussed above. *Kadambi* is cited to teach storage of data according to an associated class. However, whether or not *Kadambi* discloses storage of data according to an associated class, *Kadambi* does not cure the deficiencies of *Hiscock*. Therefore, no combination of *Hiscock* and *Kadambi* renders claim 18 obvious.

Conclusion

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, claims 1-4, 6-20 and 22-35 are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application.

Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP

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Paul A. Mendonsa
Attorney for Applicant
Reg. No. 42,879

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, CA 90025-1026
(503) 684-6200

MARKED VERSION OF THE AMENDMENTS

IN THE SPECIFICATION

In paragraph 0021:

> Each egress card includes a port for each ingress card to which the [ingress] egress card is coupled. For example, egress card 0 is coupled to ingress card 0 through port 0, to ingress card 1 through port 1, to ingress card 2 through port 2, and to ingress card 3 through port 3. The ports of the egress card are coupled to an egress buffer. The egress buffer is coupled to an egress scheduler that outputs data to a device external to the egress card (not shown in Figure 2).

IN THE CLAIMS

9. (Amended) The network switch of claim 2 [5] in which the egress interfaces generate a flow control signal to prevent access by one or more of the queues at the ingress interfaces to the egress buffer.